

*Rpt #5*

DOWNGRADED TO  
UNCLASSIFIED  
JUN 27 1950

# MEDICAL RESEARCH LABORATORY



U. S. Naval Submarine Base  
New London

REPORT ON RELIABILITY TEST OF N.D.R.C. ADAPTOMETER, MODEL II  
CONDUCTED AT SUBMARINE BASE, NEW LONDON, CONNECTICUT

28 July 1942

APPROVED FOR PUBLIC  
RELEASE - DISTRIBUTION  
UNLIMITED

REPORT ON RELIABILITY TEST OF N.D.R.C. ADAPTOMETER, MODEL II,  
CONDUCTED AT SUBMARINE BASE, NEW LONDON, CONNECTICUT

-----

S24-1 (194) CWS/AE

July 28, 1942

From: Board of Medical Examiners for Night Vision.  
To : Division of Research, Bureau of Medicine and  
Surgery, Navy Department, Washington, D. C.  
Via : Commander, Submarines Atlantic Fleet.  
Subject: Report on Reliability Test of N.D.R.C. Adaptometer,  
Model II, conducted at Submarine Base, New  
London, Connecticut.  
Reference: Consulant Confidential Letter S24-1 (0214) May 25,  
1941.

1. A report on reliability test of N.D.R.C. Adaptometer Model II, is herewith submitted.

2. N.D.R.C. Adaptometer Model II was left at the Submarine Base, New London, Connecticut, by Dr. Charles W. Bray of the National Research Council so that reliability data might be obtained from a group of Submarine Base personnel. On July 25th and 26th such a series was run by Doctors Bartlett and Verplanck, psychologists attached to the Night Vision Board, Submarine Base, New London, Conn.

3. Nineteen subjects were employed. These men were prisoners in the Brig and constituted a group whose behavior, outside of the experimental situation, was adequately controlled, especially with respect to sleep and to the use of liquor. Nine men were tested on the morning of July 25th and ten on the afternoon of the same day. On the following day each man was retested after an interval of approximately twenty-four hours. The procedure employed on the first day was that developed by Dr. Bray at Princeton University. On the second day the same procedure was employed, with the exception that the initial instructions were abbreviated, being reduced to some half dozen practice trials with a brief verbal reminder of the use of the fixation light and of the permissibility of guessing.

4. The cooperation of the subjects was insured by a reward of one package of cigarettes to each man, with the prize of a carton for the man making the best score.

5. RESULTS

The mean score on the first day was 21.02, on the second day 20.01. Corresponding Standard Deviations were 6.82 and 7.32

REPORT ON RELIABILITY TEST OF N.D.R.C. ADAPTMETER, MODEL II,  
CONDUCTED AT SUBMARINE BASE, NEW LONDON, CONNECTICUT (Cont'd)

-----

respectively. The difference in the means, then, was fortuitous, as is evident from examination of the Critical Ratio of .70. The test-retest reliability coefficient of the Test determined by this experiment is .63. When corrected for attenuation the test-retest reliability proved to be .77.

6. These results would seem to indicate that under the present test conditions, the N.D.R.C. Adaptometer Model II yields data which are satisfactorily reliable.

C. W. SHILLING

Copies to:

Coordinator of Research and Development, Office of the  
Secretary of the Navy, Washington, D. C.  
Commander, Submarine Base, New London, Connecticut (2)  
Dr. Walter R. Miles, N.R.C., Yale University, New Haven, Conn.  
Subcommittee on Visual Problems of the Committee on Aviation  
Medicine, Committee on Medical Research.  
Interior Control Board, Washington, D. C.